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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,878	10/29/2003	Shozo Katsuki	740709-510	4093

22204 7590 07/14/2005

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EXAMINER	
LAVILLA, MICHAEL E	

ART UNIT	PAPER NUMBER
1775	

DATE MAILED: 07/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/694,878	KATSUKI ET AL.	
	Examiner	Art Unit	
	Michael La Villa	1775	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-13 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-13 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 29 October 2003 is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to because Figure 1 appears to depict almost nothing and because Figures 2 and 3 are sketchy in appearance. Were applicant to consider the present figures to be accurate representations of what is to be depicted, some image boundaries or arrowed explanations may assist the viewer. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

3. A person shall be entitled to a patent unless –

4. (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 3-5, 7-10, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamamoto et al. USP 6,251,507. Yamamoto teaches laminating copper electrolytic foil to a polyimide substrate to obtain high peel strength laminates. See Yamamoto (col. 2, line 42 through col. 3, line 20; col. 5, lines 40-67; col. 8, line 38 through col. 10, line 23). Yamamoto does not mention the presence of protrusions on the copper surface. Yamamoto describes the foil as being very flat and having good surface appearance. There is no basis for assuming the presence of protrusions forbidden by the claim. Yamamoto describes initial peel strengths far in excess of the claimed minimum. Applicant's data suggests that post-treatment peel strengths of about 50% of the initial peel strength can be expected. Since applicant has not described taking any particular steps in order to achieve these 50% values they are presumptively inherently obtained absent evidence to the contrary. Hence, Yamamoto's

laminates would be expected to meet the claimed post-treatment peel strength limitations inherently.

7. Claims 1 and 3-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Takahashi et al. USP 6,838,184. Takahashi teaches laminating copper electrolytic foil to polyimide substrate to obtain high peel strength and to obtain the claimed protrusion structure. See Takahashi (col. 2, lines 15-58; col. 7, lines 5-23 and 40-57; and Examples 1 and 2).
8. The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.
9. Claims 1 and 3-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Katsuki et al. USPA 2005/0118438. Katsuki teaches laminating copper electrolytic foil to polyimide substrate to obtain high peel strength and to obtain the claimed protrusion structure. See Katsuki (paragraphs 45-59, 62-74, 93, and 94; and Table 1).
10. The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be

overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

11. Claims 1 and 3-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Katsuki et al. USPA 2003/0049487. Katsuki teaches laminating copper electrolytic foil to polyimide substrate to obtain high peel strength and to obtain the claimed protrusion structure. See Katsuki (paragraphs 45-59, 62-74, 93, and 94; and Table 1).

12. The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

14. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

15. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al. USP 6,251,507. Yamamoto teaches laminating copper electrolytic foil to a polyimide substrate to obtain high peel strength laminates. See Yamamoto (col. 2, line 42 through col. 3, line 20; col. 5, lines 40-67; col. 8, line 38 through col. 10, line 23). Yamamoto does not mention the presence of protrusions on the copper surface. Yamamoto describes the foil as being very flat and having good surface appearance. There is no basis for assuming the presence of protrusions forbidden by the claim. Yamamoto describes initial peel strengths far in excess of the claimed minimum. Applicant's data suggests that post-treatment peel strengths of about 50% of the initial peel strength can be expected. Since applicant has not described taking any particular steps in order to achieve these 50% values they are presumptively inherently obtained absent evidence to the contrary. Hence, Yamamoto's laminates would be expected to meet the claimed post-treatment peel strength limitations inherently. Yamamoto does not teach the claimed width of the laminate, but does suggest widths in excess of 500 mm and exemplifies laminates of about 530 mm. It would have

been obvious to one of ordinary skill in the art at the time of the invention to fabricate the laminate of Yamamoto with a width of 540 mm or greater since Yamamoto teaches that effective laminates may have widths in excess of 500 mm, which includes 540 mm, as it is proximate to exemplified 530 mm widths.

CONCLUSION

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael La Villa whose telephone number is (571) 272-1539. The examiner can normally be reached on Monday through Friday.

17. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on (571) 272-1535. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

18. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael La Villa
9 July 2005

MICHAEL E. LAVILLA PH.D.
PRIMARY EXAMINER